

# Work Order ID 112266

January-30-14 11:25:04 AM

**\*112266\***

Page 1

Item ID: D4917-300 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Placard, Max Load  
 Start Date: 1/27/14 Start Qty: 10.00 **\*10\*** Cust Item ID:  
 Required Date: 1/30/14 Req'd Qty: 10.00 **\*10\*** Customer:  
 Reference:

Approvals: Process Plan: MLJ Date: 4-01-31 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4917	A								

100

0.00

**\*100\***

Purchasing

Purchasing

Memo

0.00

Issue P/O: 22919

E-mail or Ship electronic file and or dwg to vendor

Manufacture as per Dwg and supplied files

Possible supplier: Studio Letrage

Material release note is required.

CX 14/02/07 12

110

Receive & Inspect for Damage & Mat'l Certs

0.00

**\*110\***

Packaging

Packaging

Memo

0.00

14/1/12 (p2)

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other
--	--	---	--

# Work Order ID 112266

January-30-14 11:25:04 AM

**\*112266\***

Page 2

Item ID: D4917-300 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Placard, Max Load  
Start Date: 1/27/14 Start Qty: 10.00 **\*10\*** Cust Item ID:  
Required Date: 1/30/14 Req'd Qty: 10.00 **\*10\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC6- Inspect dimensions to drawing	0.00				12			
<b>*120*</b>									
QC	Memo	0.00							
Quality Control									
130	Identify as per dwg & Stock Location: <u>57126</u>	0.00							
<b>*130*</b>						12			DAS
Packaging	Memo	0.00							33 14-02-12
Packaging									9-89
140	QC21- Final Inspection - Work Order Release	0.00							
<b>*140*</b>									
QC	Memo	0.00							
Quality Control									

14-02-13  
14-02-13

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other
--	--	---	--

# Picklist Print

January-30-14 11:25:03 AM

Page 1

Work Order ID: 112266

Parent Item: D4917-300

Start Date: 1/27/14

Required Date: 1/30/14

Parent Item Name: Placard, Max Load

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP REV:A 13.12.31 NEW ISSUE DD VERF:RQ

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4917-300P Placard, Max Load		Purchased	No				Each	0.0000		10		1/27/14	

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

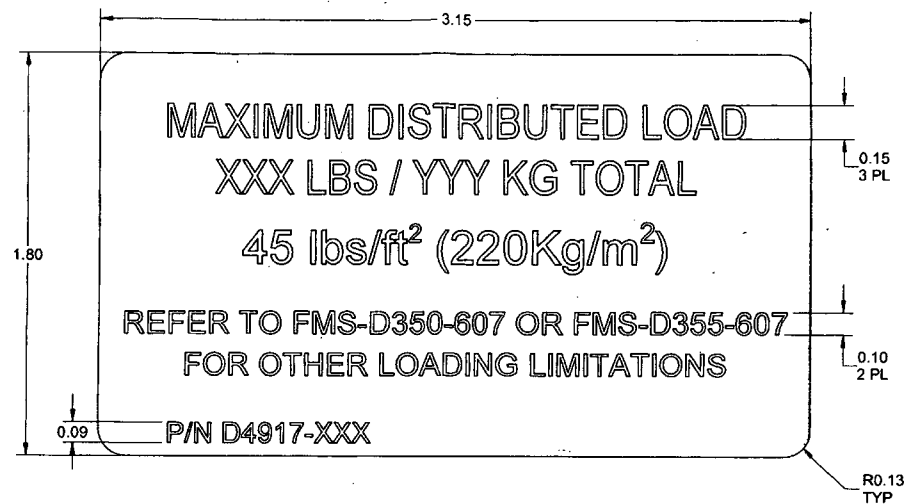
Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width:100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence
		<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other



112266 MLS  
1401-31

2017-06-13  
A.P. ECU 13-672

**D4917-XXX PLACARD, MAX LOAD**

PART NUMBER	LOAD
D4917-300	300 lbs / (136 kgs)
D4917-310	310 lbs / (141 kgs)
D4917-315	315 lbs / (143 kgs)
D4917-320	320 lbs / (145 kgs)
D4917-332	332 lbs / (151 kgs)
D4917-343	343 lbs / (156 kgs)

**NOTES:**

- 1) MATERIAL: MAKE FROM 3M 7 MIL MASKING FILM #8522CP ON AVERY IPM #2031 ARIAL FONT, RED LETTERING (0.31 HIGH) ON WHITE ADHESIVE BACK.
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART "P/N D4917-XXX" USING ARIAL FONT, RED LETTERING (0.09" HIGH).  
WHERE XXX = MAX DISTRIBUTED WEIGHT IN LBS PER TABLE
- 7) WEIGHT: LESS THAN 0.01 lbs

A		NEW ISSUE		AJS	13.06.06
REV.	DESCRIPTION			BY	DATE
DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		REV. A	SHEET 1 OF 1
DRAWN	AJS				
CHECKED	ML	DRAWING NO. D4917		SCALE	
MFG. APPR.	<i>[Signature]</i>	TITLE PLACARD, MAX LOAD		NTS	
APPROVED	<i>[Signature]</i>				
DE APPR.	<i>[Signature]</i>				
DATE	13.06.06				
<small>COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>					



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO22919**

Purchase Order Date 2/7/2014

PO Print Date 2/7/2014

Page Number 2 of 3

**Order From :**

VC-STU001

**Ship To :** DART AEROSPACE LTD

STUDIO DE LETTRAGE 2001  
210 MAIN WEST  
HAWKESBURY, ON K6A 2H6  
CA

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**Contact Name**

**Vendor Phone**

613 632 5449

**Ship To Contact**

**Ship To Phone**

**Ship Via:**

Yours ppd

**Ship Acct:**

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #**

10127-2607

**Terms**

Net 30

**Currency**

CAD

**FOB**

Destination-Collect

**Line Total:** \$80.00

4	D4917-315P	Placard, Max Load	2/13/2014 Yes 2/13/2014	12.00 Each	\$6.67	\$80.00
---	------------	-------------------	-------------------------------	---------------	--------	---------

AS PER DWG D4917 REV. A  
B112251

**Line Total:** \$80.00

5	D4917-300P	Placard, Max Load	2/13/2014 Yes 2/13/2014	12.00 Each	\$6.67	\$80.00
---	------------	-------------------	-------------------------------	---------------	--------	---------

AS PER DWG D4917 REV. A  
B112266

**Line Total:** \$80.00

6	D4917-320P	Placard, Max Load	2/13/2014 Yes 2/13/2014	12.00 Each	\$6.67	\$80.00
---	------------	-------------------	-------------------------------	---------------	--------	---------

AS PER DWG D4917 REV. A  
B112209

**PO Instructions:** Procurement Quality Clauses  
A005 right of entry  
A013 self life controlled material 80%  
A026 certification of material conformance  
A040 notification of quality escape  
A042 dart notification by supplier

**Note:**



**210 Main Street W  
Hawkesbury, Ontario K6A 2H6**

Invoice No.: 21617  
Date: 02/10/2014  
Ship Date: 02/11/2014  
Page: 1  
Re: Order No. WO11804

**Dart Aerospace Ltd**  
1270 Aberdeen  
Hawkesbury, Ontario K6A 1K7

Dart Aerospace Ltd  
Hawkesbury, Ontario

Item No.	Unit	Quantity	Description	Tax	Unit Price	Amount
		12	D3312/1P	H	6.6667	80.00
		12	D3428/1P	H	6.6667	80.00
		12	D4597/1P	H	6.6667	80.00
		12	D4917/315P	H	6.6667	80.00
		12	D4917/300P	H	6.6667	80.00
		12	D4917/320P	H	6.6667	80.00
		12	D4917/332P	H	6.6667	80.00
			PO#22919 Chantal Lavoie			
			H - HST 13%			
			HST			72.80
Studio de Lettrage HST: #825007651RT0001						
Shipped By:                      Tracking Number:						
Comment:					Total Amount	632.80
Sold By:						

\*\*\*\*Certificate of Conformity\*\*\*\*

**Customer:**

STUDIO LEHRAGE

**Purchase Order #:**

22919

**Packing Slip #:**

11804

**Part #:**

**Serial #:**

**Description:**

D3312/IP, D3428/IP,  
D4597/IP, D4917/315P, D4917/300P  
D4917/320P, D4917/332P

**Quantity:**

**Certification:**

We hereby certify that:

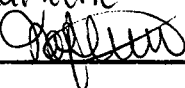
1. The above the listed items were manufactured, repaired and/or inspected in accordance with applicable drawings and/or specifications;
2. All work was accomplished in accordance with the Dart Aerospace Purchase Order;
3. Results of all inspections, chemical or physical tests, as well as other evidence, which shows the acceptability of raw materials, parts and/or assembly components are on file and available for inspection at any time.

**Authority:**

AVERY

**APPROVAL:** Natasha Belangee-  
Lafleche

**Signature:**



**Title:**

Job Coordinator

**DATE:**

FEB 11<sup>th</sup> 2014

## PRODUCT DATA SHEET



### Avery® IPM™ 2031

issued: 01/04/2005

#### Introduction

Avery® IPM™ 2031 is a high quality pressure-sensitive vinyl film, designed for use on wide format inkjet printers. Avery® IPM™ 2031 has excellent printing properties, allowing crisp print quality with bright and vibrant colours. Avery® IPM™ 2031 offers rapid ink drying and a water-resistant material. It combines good adhesion during its life and easy removal afterwards.

#### Description

Facefilm: 80-micron premium white calendered, topcoated vinyl.  
Adhesive: removable, acrylic based  
Backing paper: one side coated kraft paper, 140 g/m<sup>2</sup>

#### Features

- Excellent printability
- Vibrant and bright colours
- Crisp print quality
- Spray water resistant wit specific pigmented inks
- Good adhesion, excellent removability
- Warranty on outdoor durability

#### Recommendations for use

A wide variety of full-colour graphics for indoor - and **short/medium term outdoor** applications such as posters, murals, displays, exhibition stands, vehicle graphics etc. Avery® IPM™ 2031 is suitable for application to a wide variety of substrates and will remove cleanly for up to 1 year after application.

IPM media should be handled with care as any surface contamination may affect the print quality. Media should be processed in an environment of 15-25°C and 30-70% relative humidity. After drying, the finished prints should be wrapped in polyethylene film and despatched flat or rolled with the printed side facing outwards. To protect prints against water, UV/light and abrasion, overlamination with a clear film is recommended. For specific details of Avery® DOL combinations, refer to "Technical Bulletin 5.3. Recommended combinations of Avery® Overlaminates and Avery® Digital Print Media"

**Always test your combination of Avery® IPM™ medium, inkjet printer and inks prior to commercial use.**

#### Compatibility

Avery® IPM™ 2031 is compatible with a broad selection of inkjet printers, when printing with pigmented, water based inks. For specific details refer to "Technical Bulletin 5.6 Avery Dennison Inkjet Print Media - Printer compatibility".

#### Durability:

Avery® IPM™ 2031 is warranted for outdoor use in conjunction with pigmented outdoor inks from HP, Encad and Colorspan. The warranted period varies from type of application and type of overlaminate from 18 months up to 5 years. For full details, see our Avery® IPM™ Outdoor warranty.



[www.averygraphics.com](http://www.averygraphics.com)

Graphics Division  
Rijndijk 86, P.O. Box 118  
2394 ZG Hazerswoude - The Netherlands  
Tel +31 71 3421500 - Fax +31 71 3421538

## PRODUCT CHARACTERISTICS

Avery® IPM™ 2031

### Physical properties

Features	Test method <sup>1</sup>	Results
Caliper, facefilm	ISO 534	80 µm
Gloss	ISO 2813, 20°	1%
Dimensional stability	DIN 30646	0.3 mm. max
Adhesion, initial	FINAT FTM-1, stainless steel	180 N/m
Adhesion, ultimate	FINAT FTM-1, stainless steel	260 N/m
Flammability		Self extinguishing
Accelerating ageing	DIN 53587, 500h exposure	No negative impact on film Performance
Shelf life	Stored at 22° C/50-55 % RH	2 years
Removability		up to 1 year
Not when applied to: Nitro-cellulose paints, ABS, Polystyrene, certain types of PVC		
Durability <sup>2</sup>	Overlaminated with DOL 4300	5 years
	Overlaminated with DOL 1000, DOL 1100 with overlaps	3 years
	Overlaminated without overlaps for static applications only	2 years
	Without overlaminate and used for static, Non-abrasive application ONLY	18 months

Only when printed with ENCAD GO, HP and Colorspan pigmented inks and when properly applied in accordance with our application instructions. Only applicable for vertical exposure.

### Temperature range

Features	Results
Application temperature	Minimum: +10°C
Service temperature	-20°C to +80°C

#### Important

Information on physical and chemical characteristics is based upon tests we believe to be reliable. The values listed herein are typical values and are not for use in specifications. They are intended only as a source of information and are given without guarantee and do not constitute a warranty. Purchasers should independently determine, prior to use, the suitability of this material to their specific use. All technical data are subject to change. In case of any ambiguities or differences between the English and foreign versions of these Conditions, the English version shall be controlling.

#### Warranty

Avery® branded materials are manufactured under careful quality control and are warranted to be free from defect in material and workmanship. Any material shown to our satisfaction to be defective at the time of sale will be replaced without charge. Our aggregate liability to the purchaser shall in no circumstances exceed the cost of the defective materials supplied. No salesman, representative or agent is authorised to give any guarantee, warranty, or make any representation contrary to the foregoing.

All Avery® branded materials are sold subject to the above conditions, being part of our standard conditions of sale, a copy of which is available on request.

#### 1) Test methods

More information about our test methods can be found on our website.

#### 2) Durability

The durability is based on middle European exposure conditions. Actual performance life will depend on substrate preparation, exposure conditions and maintenance of the marking. For instance, in the case of signs facing south; in areas of long high temperature exposure such as southern European countries; in industrially polluted areas or high altitudes, exterior performance will be decreased.



[www.averygraphics.com](http://www.averygraphics.com)

Graphics Division  
Rijndijk 86, P.O. Box 118  
2394 ZG Hazerswoude – The Netherlands  
Tel +31 71 3421500 – Fax +31 71 3421538